

AMENDMENTS TO THE CLAIMS

1-24. (Cancelled)

25. (New) A fuel cell system comprising:

a cell having a gas flow plate;

a first gas flow channel and a second gas flow channel both provided in said gas flow plate such that a flow of gas along said gas flow plate is able to flow in a series flow from one of said first and second gas flow channels to the other of said first and second gas flow channels, and in a parallel flow along both of said first and second gas flow channels; and

switching devices for switching the flow of gas from the parallel flow to the series flow, and from the series flow to the parallel flow.

26. (New) A fuel cell system comprising:

a cell having a gas flow plate;

a first gas flow channel and a second gas flow channel both provided in said gas flow plate such that a flow of gas along said gas flow plate is able to flow in a series flow from one of said first and second gas flow channels to the other of said first and second gas flow channels, and in a parallel flow along both of said first and second gas flow channels; and

switching devices for switching the flow of gas from the parallel flow to the series flow, and from the series flow to the parallel flow,

wherein said switching devices are arranged outside of said cell.

27. (New) A fuel cell system comprising:

a cell having a gas flow plate;

a first gas flow channel and a second gas flow channel both provided in said gas flow plate, said first gas flow channel extending from a first manifold to a second manifold, said second gas flow channel extending from said second manifold to a third manifold; and

switching devices for controlling a flow of gas through at least one of said first, second

and third manifolds so as to switch a flow of gas along said first and second gas flow channels from a parallel flow to a series flow, and from a series flow to a parallel flow.

28. (New) A fuel cell system comprising:

a cell having a gas flow plate;

a first gas flow channel and a second gas flow channel both provided in said gas flow plate, said first gas flow channel extending from a first manifold to a second manifold, said second gas flow channel extending from a third manifold to a fourth manifold, said second manifold and said third manifold being connected by a gas flow path; and

switching devices for controlling a flow of gas between said second manifold and said third manifold so as to switch a flow of gas along said first and second gas flow channels from a parallel flow to a series flow, and from a series flow to a parallel flow.

29. (New) The fuel cell system according to claim 25, 26, 27 or 28 wherein said first and second gas flow channels are cathode gas flow channels.

30. (New) The fuel cell system according to claim 25 or 26, further comprising:

a gas manifold connected to said first gas flow channel and said second gas flow channel.

31. (New) The fuel cell system according to claim 25 or 26, wherein said cell includes a gas diffusion backing, and wherein the fuel cell system further includes a gas flow path for allowing a gas to flow between said first gas flow channel and said second gas flow channel without contacting said gas diffusion backing.

32. (New) The fuel cell system according to claim 25, 26 or 27, further comprising:

a first pipe having a first one of said switching devices;

a second pipe having a second one of said switching devices; and

a third pipe having a third one of said switching devices, wherein said first pipe is

connected to an end of said first gas flow channel and a first end of said second gas flow channel, and wherein said second and third pipes are connected to a second end of said second gas flow channel.

33. (New) The fuel cell system according to claim 25, 26 or 28, further comprising:
a first pipe having a first one of said switching devices; and
a second pipe having a second one of said switching devices, wherein said first pipe is connected to an end of said first gas flow channel, said second pipe is connected to a first end of said second gas flow channel, and wherein a portion of said first pipe between said first one of said switching devices and said end of said first gas flow channel is connected to a portion of said second pipe between said second one of said switching devices and said first end of said second gas flow channel by a third one of said switching devices.

34. (New) The fuel cell system according to claim 25, 26, 27 or 28, wherein at least one of said switching devices is a valve.

35. (New) The fuel cell system according to claim 25, 26, 27 or 28, wherein said fuel cell system is a polymer electrolyte fuel cell system.

36. (New) The fuel cell system according to claim 25, 26, 27 or 28, wherein said fuel cell system comprises a polymer electrolyte fuel cell stack comprising said cell.

37. (New) The fuel cell system according to claim 28, wherein said cell includes a gas diffusion backing, and wherein the gas flow path is arranged so as to allow a gas to flow between said first gas flow channel and said second gas flow channel without contacting said gas diffusion backing.